What is claimed is:

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1. A cardiac rhythm management device, comprising:

one or more sensing channels for sensing depolarizations in a heart chamber and generating sense signals in accordance therewith, each such sensing channel including a sensing amplifier that can be connected to an electrode;

one or more pacing channels for delivering pacing pulses to one or more selected pacing sites;

a controller for controlling the delivery of pacing pulses in accordance with sensing signals and elapsed time intervals;

wherein the controller is programmed to recharge a pacing channel following a pacing pulse by outputting a recharging pulse for a specified recharging interval and to blank the sensing amplifiers during the time a pacing or recharging pulse is output; and,

wherein the controller is further programmed to dynamically adjust the specified recharging interval based upon a measured parameter.

- 2. The device of claim 1 wherein the controller is programmed to dynamically adjust the specified recharging interval based upon a programmed pacing pulse amplitude setting.
 - 3. The device of claim 1 wherein the controller is programmed to dynamically adjust the specified recharging interval based upon a programmed pacing pulse duration setting.
 - 4. The device of claim 1 wherein the controller is programmed to dynamically adjust the specified recharging interval based upon a programmed AV interval between an atrial and a ventricular pacing pulse.

- 5. The device of claim 1 wherein the controller is programmed to dynamically adjust the specified recharging interval based upon a programmed offset interval between ventricular paces during biventricular pacing
- 5 6. The device of claim 1 wherein the controller is programmed to dynamically adjust the specified recharging interval based upon a measured lead impedance.
 - 7. The device of claim 1 wherein the controller is programmed to dynamically adjust the specified recharging interval based upon a measured voltage droop during a pacing pulse.
 - 8. The device of claim 1 wherein the controller is programmed to dynamically adjust the specified recharging interval $T_{recharge}$ based upon the following formula:

$$T_{\text{recharge}} = -RC_1 \left(\ln \left(2V_{\text{droop}} / V_i / (1 - e^{PW/RC}) \right) \right)$$

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- where R is a measured lead impedance, C₁ is a measured lead capacitance, V_{droop} is a measured voltage droop during a pacing pulse, V_i is a programmed pacing pulse amplitude, PW is a programmed pacing pulse duration, and C is a total measured capacitance.
- 9. The device of claim 1 wherein the controller is programmed to dynamically adjust the specified recharging interval by using a look-up table that contains optimum recharge intervals corresponding to one or more programmable or measured pacing parameter values.
- 25 10. The device of claim 9 wherein the optimum recharge intervals corresponding to various parameter values are determined empirically by device testing.

11. A method for operating a cardiac rhythm management device, comprising:

sensing depolarizations in a heart chamber through one or more sensing channels and generating sense signals in accordance therewith, each such sensing channel including a sensing amplifier that can be connected to an electrode;

delivering pacing pulses through one or more pacing channels in accordance with a programmed pacing mode;

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recharging a pacing channel following a pacing pulse by outputting a recharging pulse for a specified recharging interval and blanking the sensing amplifiers during the time a pacing or recharging pulse is output; and,

dynamically adjusting the specified recharging interval based upon a measured parameter.

- 12. The method of claim 11 further comprising dynamically adjusting the specified recharging interval based upon a programmed pacing pulse amplitude setting.
- 13. The method of claim 11 further comprising dynamically adjusting the specified recharging interval based upon a programmed pacing pulse duration setting.
- 14. The method of claim 11 further comprising dynamically adjusting the specified recharging interval based upon a programmed AV interval between an atrial and a ventricular pacing pulse.
 - 15. The method of claim 11 further comprising dynamically adjusting the specified recharging interval based upon a programmed offset interval between ventricular paces during biventricular pacing.
 - 16. The method of claim 11 further comprising dynamically adjusting the specified recharging interval based upon a measured lead impedance.

- 17. The method of claim 11 further comprising dynamically adjusting the specified recharging interval based upon a measured voltage droop during a pacing pulse.
- 18. The method of claim 11 further comprising dynamically adjusting the specified recharging interval $T_{recharge}$ based upon the following formula:

$$T_{\text{recharge}} = -RC_1 \left(\ln \left(2V_{\text{droop}} / V_i / (1 - e^{PW/RC}) \right) \right)$$

where R is a measured lead impedance, C_1 is a measured lead capacitance, V_{droop} is a measured voltage droop during a pacing pulse, V_i is a programmed pacing pulse amplitude, PW is a programmed pacing pulse duration, and C is a total measured capacitance.

- 19. The method of claim 11 further comprising dynamically adjusting the specified recharging interval by using a look-up table that contains optimum recharge intervals corresponding to one or more programmable or measured pacing parameter values.
- 20. The method of claim 19 wherein the optimum recharge intervals corresponding to various parameter values are determined empirically by device testing.

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